STAAR®

State of Texas Assessments of Academic Readiness

MATHEMATICS
Grade 4

2015 Released Test Questions

1 In the number shown, one digit is underlined and one digit is circled.

$$\underline{7}\textcircled{7},000$$

Which statement about the circled digit is true?

A Its value is 10 times greater than the value of the underlined digit.

B Its value is $\frac{1}{10}$ the value of the underlined digit.

C Its value is 70 times the value of the underlined digit.

D Its value is $\frac{1}{70}$ the value of the underlined digit.

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2 Lillian paid sixty-one dollars and thirty-nine cents for groceries. The digit 3 in this number has a value of —

A (3×10) dollars

B (3×1) dollars

C (3×0.01) dollar

D (3×0.1) dollar

3 Antwaan decorated 2.5 cakes with chocolate icing. Which fraction is equivalent to this number?

A $\frac{25}{100}$

B $\frac{5}{10}$

C $2\frac{5}{10}$

D $2\frac{5}{100}$

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4 Which expression is equivalent to $\frac{6}{5}$?

A $\frac{1}{6} + \frac{1}{5}$

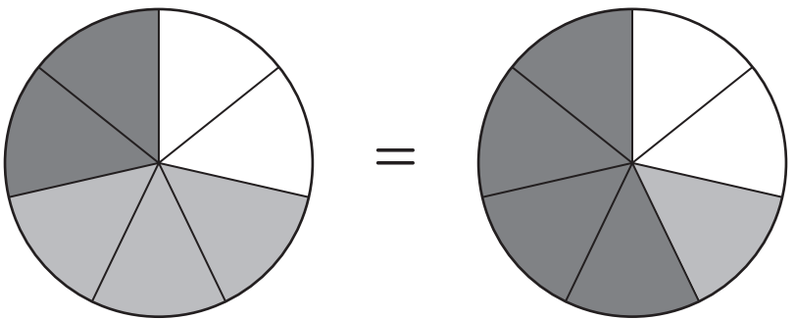
B $\frac{1}{5} + \frac{1}{5} + \frac{1}{5} + \frac{1}{5} + \frac{1}{5} + \frac{1}{5}$

C $\frac{1}{5} + \frac{6}{1}$

D $\frac{1}{6} + \frac{1}{6} + \frac{1}{6} + \frac{1}{6} + \frac{1}{6}$

5 The two models are shaded to represent the same fraction, $\frac{5}{7}$.

Model 1 Model 2



Which equation shows that the two models represent the same fraction?

A $\frac{2}{7} + \frac{3}{7} = \frac{4}{7} + \frac{1}{7}$

B $\frac{2}{7} + \frac{3}{7} = \frac{5}{7} + \frac{1}{7}$

C $\frac{1}{2} + \frac{1}{3} = \frac{1}{4} + \frac{1}{1}$

D $\frac{1}{2} + \frac{1}{3} = \frac{1}{5} + \frac{1}{1}$

6 Which statement about the fractions $\frac{5}{10}$ and $\frac{6}{12}$ is true?

A These fractions are both greater than 1, because their denominators are greater than their numerators.

B These fractions are both equal to 1, because their denominators are greater than their numerators.

C These fractions are equivalent, because their denominators are half their numerators.

D These fractions are equivalent, because their denominators are twice their numerators.

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7 Faith has completed $\frac{6}{18}$ of her math homework. Olivia has completed $\frac{4}{9}$ of her math homework. Which of these girls has completed a greater fraction of her math homework?

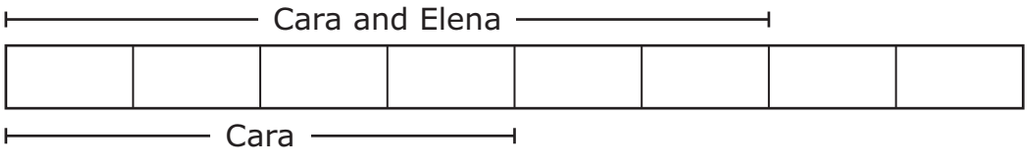
A Faith, because $\frac{6}{18} > \frac{4}{9}$

B Faith, because $\frac{6}{18} < \frac{4}{9}$

C Olivia, because $\frac{4}{9} < \frac{6}{18}$

D Olivia, because $\frac{4}{9} > \frac{6}{18}$

8 Cara and Elena used fabric to make costumes for a talent show. Cara used $\frac{4}{8}$ of the fabric for her costume. The girls used $\frac{6}{8}$ of the fabric altogether.



What fraction of the fabric did Elena use?

A $\frac{10}{16}$

B $\frac{10}{8}$

C $\frac{2}{8}$

D $\frac{1}{2}$

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9 Hailey and Wendy painted an entire wall together. Hailey painted $\frac{3}{7}$ of the wall, and Wendy painted the rest. Which statement is true?

A Hailey painted less than half the wall, and Wendy painted more than half the wall.

B Hailey painted more than half the wall, and Wendy painted less than half the wall.

C Each girl painted more than half the wall.

D Each girl painted less than half the wall.

10 The locations and lengths of three of the longest tunnels in the world are listed.

- Gotthard Base Tunnel in Switzerland, 57.07 km
- Seikan Tunnel in Japan, 53.85 km
- Channel Tunnel between England and France, 50.45 km

What is the difference between the length of the Channel Tunnel and the length of the Gotthard Base Tunnel in kilometers?

A 3.22 km

B 7.62 km

C 6.62 km

D 7.42 km

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11 Kareem will use beads to make bracelets. He has 475 beads and needs to use 9 beads for each bracelet. What is the greatest number of bracelets Kareem can make with 475 beads?

A 52

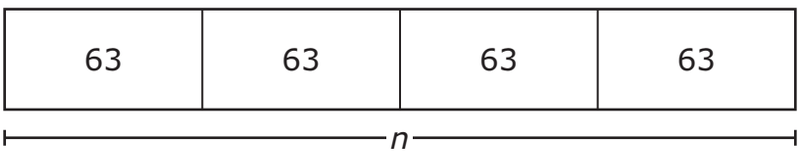
B 49

C 45

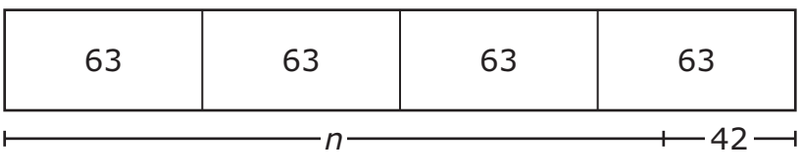
D 53

12 Madeline has 4 rolls of tape. Each roll contains 63 inches of tape. Madeline used 42 inches of tape for a project. Which diagram shows a way to find n, the number of inches of tape that Madeline has left?

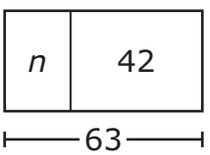
A



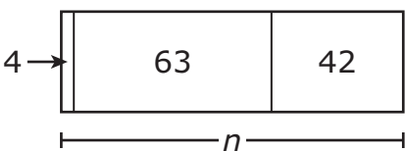
B



C



D



13 The table shows a relationship between the input numbers and the output numbers generated by a number machine.

Number Machine

Input	Output
1	79
2	80
3	81
4	82

Which number machine shows the same relationship as the one shown in the table?

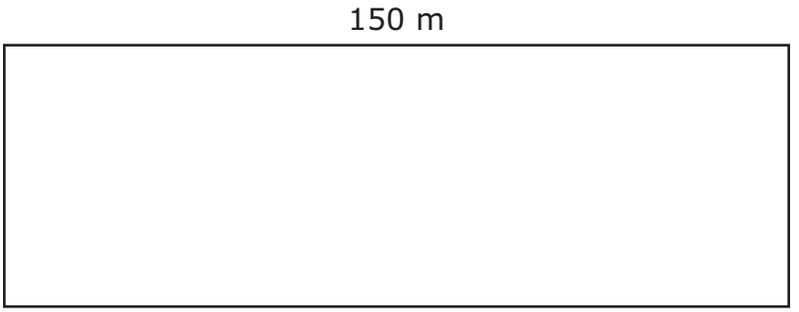
A Input → +1 → Output

B Input → ×40 → Output

C Input → +78 → Output

D Input → ×79 → Output

14 The model shows a rectangular field with a length of 150 m. The perimeter of the field is 400 m.



What is the width of the field in meters?

A 250 m

B 100 m

C 125 m

D 50 m

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15 Which figure **cannot** have parallel line segments?

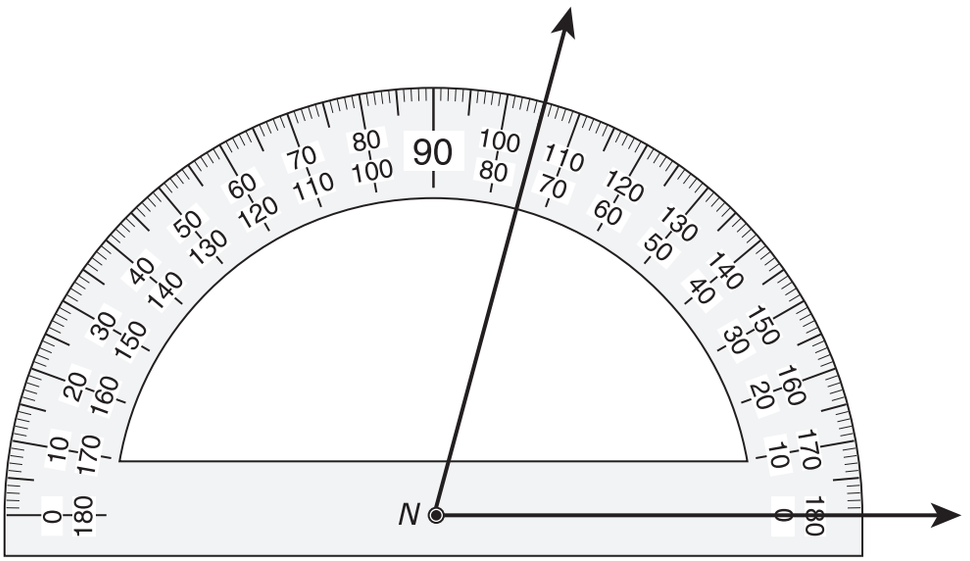
A Square

B Pentagon

C Triangle

D Trapezoid

16 Angle *N* is shown on this protractor.



What is the measure of angle *N* to the nearest degree?

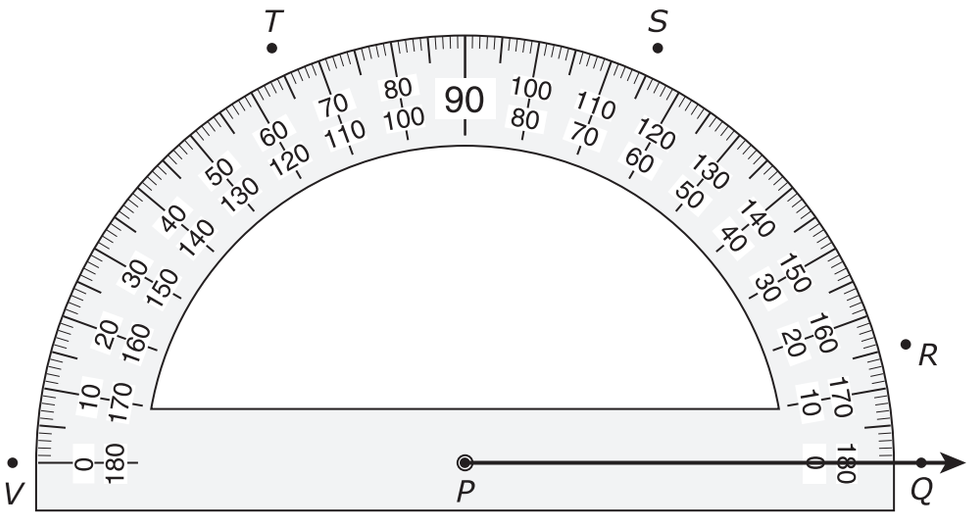
A 75°

B 105°

C 80°

D 180°

17 Frank is using a protractor to construct an angle that measures 65°. First he draws ray *PQ*, as shown on the protractor.



To complete the 65° angle, Frank should draw another ray that starts at point *P* and passes through —

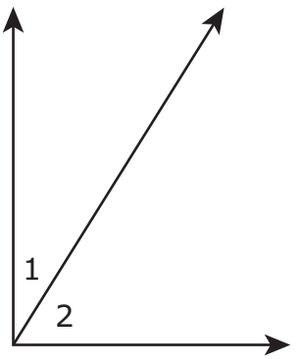
A point *R*

B point *S*

C point *T*

D point *V*

18 Angle 1 and angle 2 form a right angle.



The measure of angle 1 is 32°. What is the measure of angle 2?

A 32°

B 90°

C 58°

D 62°

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19 Vivian had a $5 bill, 3 quarters, 2 dimes, and 5 nickels. She paid for a poster that cost $5.36. How much money does she have left?

A $1.16

B $0.84

C $6.20

D $0.04

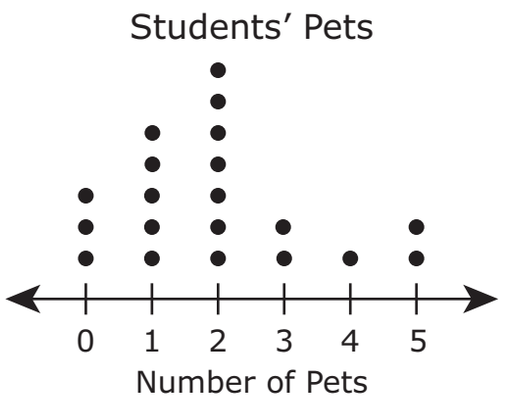
20 The table shows the number of pets that each student in Mrs. Morris's class owns.

Students' Pets

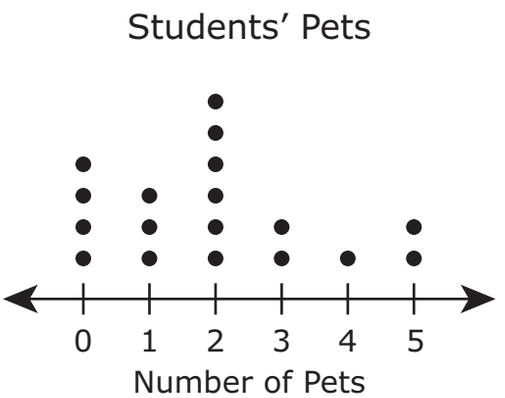
Number of Pets	Frequency
0	𝍸
1	III
2	𝍸 II
3	II
4	I
5	II

Which dot plot represents the data in the table?

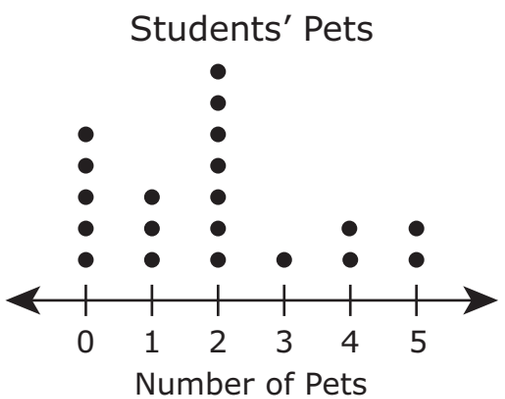
A



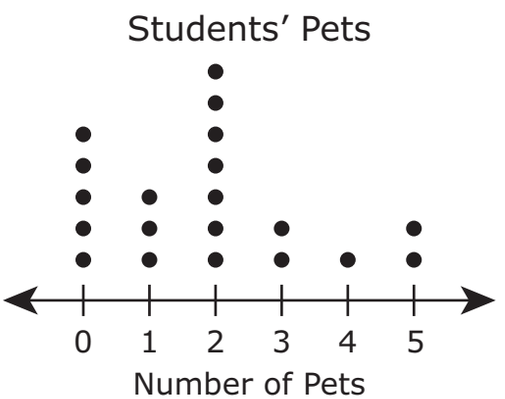
C



B



D



21 Karnika recorded the number of minutes she practiced volleyball each week for several weeks. She used a stem and leaf plot to organize the data.

Volleyball Practice Time

Stem	Leaf
14	0 2 2
15	5 5
16	0

14|2 means 142 minutes.

Based on the data, what is the amount of time in minutes Karnika practiced volleyball?

A 894 min

B 597 min

C 594 min

D 1,224 min

22 Raina sold pens decorated with fancy tape.

- Raina's expenses were $11.57 for supplies.
- Raina sold 12 pens for $2 each.

What was Raina's profit?

A $24.00

B $35.57

C $12.43

D $2.43

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23 Which of these services is **not** provided by a financial institution such as a bank or credit union?

A Informing customers of the amount of money in their accounts

B Informing customers of how the money in their accounts must be spent

C Providing cash when customers make withdrawals from their accounts

D Providing loans to customers that can be paid back over time with interest

Item Number	Correct Answer	Reporting Category	Readiness or Supporting	Content Student Expectation	Process Student Expectation
1	B	1	Supporting	4.2(A)	4.1 (B),(G)
2	D	1	Readiness	4.2(B)	4.1 (A),(B),(D),(F)
3	C	1	Readiness	4.2(G)	4.1 (A),(B),(F)
4	B	1	Supporting	4.3(A)	4.1 (B),(F)
5	A	1	Supporting	4.3(B)	4.1 (B),(E),(F)
6	D	1	Supporting	4.3(C)	4.1 (B),(G)
7	D	1	Readiness	4.3(D)	4.1 (A),(B),(G)
8	C	2	Readiness	4.3(E)	4.1 (A),(B),(E),(F)
9	A	2	Supporting	4.3(F)	4.1 (A),(B),(G)
10	C	2	Readiness	4.4(A)	4.1 (A),(B),(F)
11	A	2	Readiness	4.4(H)	4.1 (A),(B),(F)
12	B	2	Readiness	4.5(A)	4.1 (A),(B),(D),(F)
13	C	2	Readiness	4.5(B)	4.1 (B),(D),(F)
14	D	3	Readiness	4.5(D)	4.1 (A),(B),(C),(E),(F)
15	C	3	Readiness	4.6(D)	4.1 (B),(F)
16	A	3	Readiness	4.7(C)	4.1 (B),(C),(F)
17	B	3	Supporting	4.7(D)	4.1 (A),(B),(C),(F)
18	C	3	Supporting	4.7(E)	4.1 (B),(E),(F)
19	B	3	Readiness	4.8(C)	4.1 (A),(B),(F)
20	D	4	Readiness	4.9(A)	4.1 (A),(B),(D),(F)
21	A	4	Supporting	4.9(B)	4.1 (A),(B),(E),(F)
22	C	4	Supporting	4.10(B)	4.1 (A),(B),(F)
23	B	4	Supporting	4.10(E)	4.1 (A),(B),(G)